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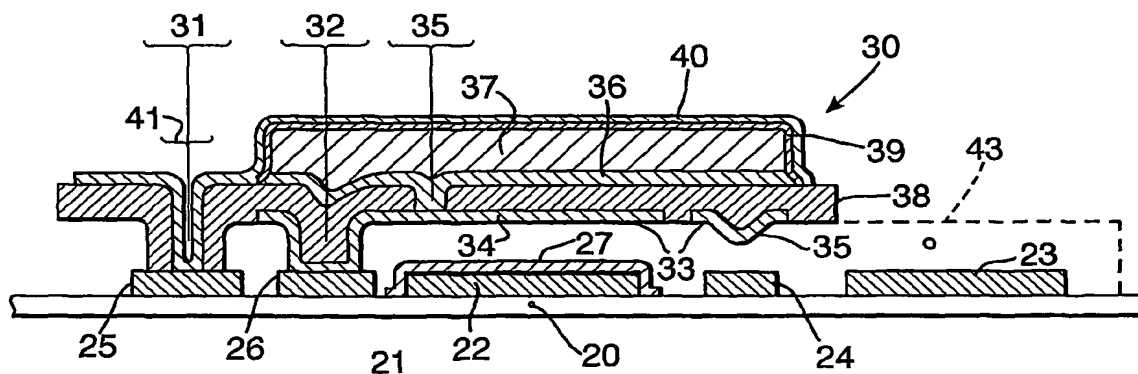
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(54) Title: MICRO ELECTROMECHANICAL SYSTEM SWITCH.



(57) Abstract: A micro electromechanical system (MEMS) switch includes a fixed contact (24) and a moveable contact (35) on an armature (30). The switch has electrodes (22, 34) associated with both the fixed and moveable contacts for providing an electrostatic switch operation and piezoelectric material with associated electrodes (36, 40) for bending the armature upon application of an electric voltage and providing an initial piezoelectric switch operation followed by electrostatic switching and clamping. The armature is of curved shape which is bent away from the fixed contact when in a switch open condition with zero applied voltage. This gives a large, e.g. 3µm, switch gap in an OFF state which is reduced by piezoelectric operation suitable for electrostatic switch closing. A curved condition is provided by varying strain across the armature thickness, and is produced during manufacture of the switch.

WO 2005/022575 A1